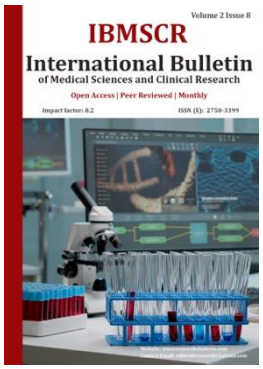


# LUMBAR AND THE HUMP PLEXUS: FORMATION, TOPOGRAPHY, INNERVATION FIELDS. INNERVATION OF THE SKIN OF THE FEET.

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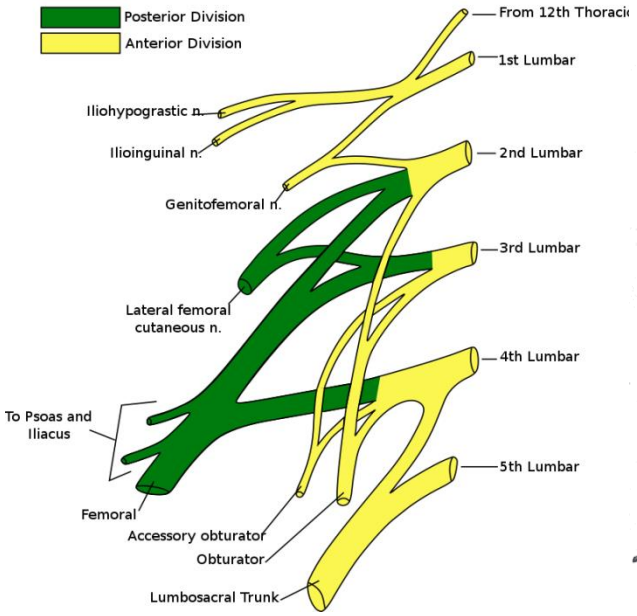
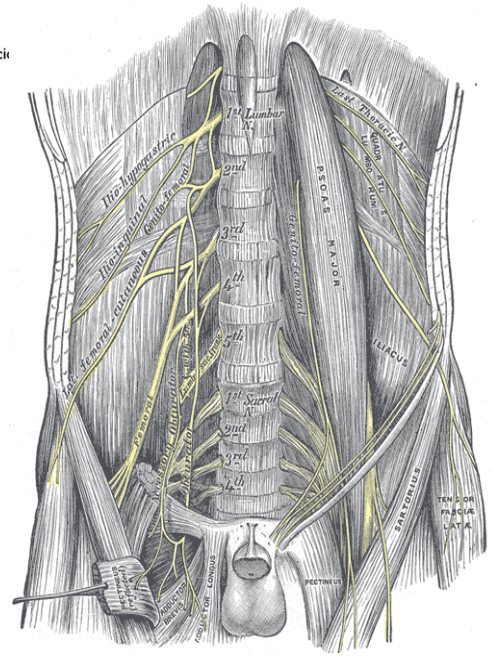
Annotation: This article is about Lumbar and lumbar plexus: formation, topography, networks and innervation fields. The lumbar plexus is one of two nerve plexuses that supply the lower limbs. The psoas major muscle is formed on the back wall of the abdomen. Branches of the plexus go through the medial and lateral borders, as well as through its ventral surface. It is a complex plexus that gives branches to complete the formation of the lumbo-sacral plexus. The branches mainly supply the femoral, anterior and medial sections of the thigh. They also provide hip and knee joints. The innervation of the skin by the branches of the lumbar plexus is limited to the anterior, lateral and medial parts of the thigh, the medial side of the foot and leg, as well as the lower part of the anterior abdominal wall and the perineum. Regional anesthesia is a highly skilled and accurate method that is widely used to reduce the consumption of drugs in patients and to reduce intraoperative and postoperative complications. A lumbar plexus block can be used in operations involving the hip joint and hip and anterior thigh. Proper knowledge of the anatomy of the lumbar plexus is required to perform the procedure successfully.

**Key words:** Lumbar plexus, Branches, Regional anesthesia.

Lumbar plexus (plexus lumbalis) is formed by the junction of the divisions of the first four lumbar nerves (L1-L4) and the last thoracic nerve (T12). , is located on the front surface of the quadrate muscle of the back, on the back of the large psoas muscle. In addition, the ventral branches of the fourth lumbar nerve pass from the lumbosacral trunk to the coccygeal plexus. The nerves of the lumbar plexus mainly innervate the front part of the thigh [1].

The nerve bundle is formed laterally along the intervertebral foramina and passes through the psoas major muscle. Its smaller motor branches are distributed directly to the area of the psoas major muscle, and its large branches pass down the pelvis through various parts of the muscle. comes out of the cavity through the cover hole [1].



Networks

The iliohypogastricus nerve (n. iliohypogastricus) runs laterally and obliquely in front of the square muscle of the lower back, behind the area of the large lumbar muscle. This muscle crosses the transverse abdomen from the side and passes along the iliac bone in the middle of the internal oblique muscle of the abdomen. This network supplies several motor branches and sensory branches to the skin of the lateral thigh. Then, its terminal branch passes parallel to the clavicle, exits from the aponeurosis of the external slope of the abdominal cavity on the external clavicle ring and innervates the skin [2].

The iliac nerve (n. ilioinguinalis) is n above the square muscle of the lower back. goes through the iliohypogastricus and then passes under it. This nerve passes between the transverse and internal oblique muscles of the abdomen, innervates the lateral muscles of the abdomen and enters the chow canal. After exiting the external opening of the scrotal canal in men, there are anterior nerves of the scrotum (nn. scrotales anteriores), the area of the scrotum and scrotum, the root of the penis, the skin of the scrotum, and the anterior nerves of the labia in women (nn. labiales anteriores). innervates the skin of the labia majora [2].

The femoral-genital nerve (n. genitofemoralis) pierces the large lumbar muscle and divides into two branches: genital and femoral. and innervates the skin, the skin of the medial surface of the thigh. In women, it innervates the round neck of the uterus, the skin of the labia majora, as well as the skin of the external opening of the femoral canal. The femoral branch (r. femoralis) passes through the bottom of the vascular area, passes to the area of the femoral triangle and innervates its skin[2].

The lateral nerve of the skin of the thigh (n. cutaneus femoris lateralis) leaves the lateral edge of the large psoas muscle and goes down in front of the iliac muscle. It passes under the lateral part of Chov's ligament to the thigh and innervates the skin of the thigh to the knee joint [2].

The obturator nerve (n. obturatorius) goes down from the large lumbar muscle and enters the small pelvis. Passing through the closed channel, the hip adductor muscle comes out in the middle and divides into two branches. The muscle branches (rr. musculares) of the anterior branch (r. anterior) innervate the comb-like, long and short muscles that bring the thigh

closer. Its skin network (r. cutaneus) innervates the skin of the medial surface of the thigh. If the muscle branches of the back network (r. posterior) (rr. musculares) pass behind the short muscle that brings the thigh closer and innervates the external sphincter and the large muscle that brings the thigh closer, its joint network (r. articularis) is hip-thigh innervates the joint bag [3].

The femoral nerve (n. femoralis) is the largest and the longest of the lumbar spine. It exits the femoral triangle through the egate between the large lumbar and iliac muscles. It is divided into the following branches from the chow branch:

a) muscle branches (rr. musculares) innervate the tailor's muscle, comb muscle and quadriceps of the thigh;

b) anterior skin branches (rr. cutanei anteriores) are 3-5 and innervate the skin of the anterior medial surface of the thigh;

d) the subcutaneous nerve (n. saphenus) innervates the medial surface of the knee joint, the kneecap, the upper part of the calf. divides into the right nerve, which gives off long sensory terminal branches that continue to the foot[3].

**Nerve networks of the lumbar spine**

| Nerve | Segment | Innervated muscles | Cutaneous branches |
|---|---|---|---|
| Iliohypogastric | T12-L1 | • Transversus abdominis • Abdominal internal oblique | • Anterior cutaneous ramus • Lateral cutaneous ramus |
| Ilioinguinal | L1 | | • Anterior scrotal nerves in males • Anterior labial nerves in females |
| Genitofemoral | L1, L2 | • Cremaster in males | • Femoral ramus • Genital ramus |
| Lateral femoral cutaneous | L2, L3 | | • Lateral femoral cutaneous |
| Obturator | L2-L4 | • Obturator externus • Adductor longus • Adductor brevis • Gracilis • Pectineus • Adductor magnus | • Cutaneous ramus |
| Femoral | L2-L4 | • Iliacus • Pectineus • Sartorius • Quadriceps femoris | • Anterior cutaneous branches • Saphenous |
| Direct branches from plexus to muscle | | | |
| Short, direct branches | L1-L3 | • Psoas major | |
| Short, direct branches | T12-L4 | • Quadratus lumborum • Lumbar intertransverse | |

**The hump is tangled.**

Tools

In anatomy, the perineal plexus is a nerve plexus that supplies motor and sensory nerves to the back of the thigh, the lower leg and most of the leg, and part of the pelvis. It is part of the lumbosacral plexus and originates from the lumbar vertebrae and the sacral vertebrae (L4-S4)[1]. Coccyx plexopathy is a condition that affects the nerves of the coccyx, usually caused by trauma, nerve compression, vascular disease, or infection. Symptoms may include pain, loss of motor control, and sensory deficits.

Structure

The hump complex is formed by:

Belt and hump highway

anterior division of the first sacral nerve

parts of the anterior divisions of the second and third cranial nerves

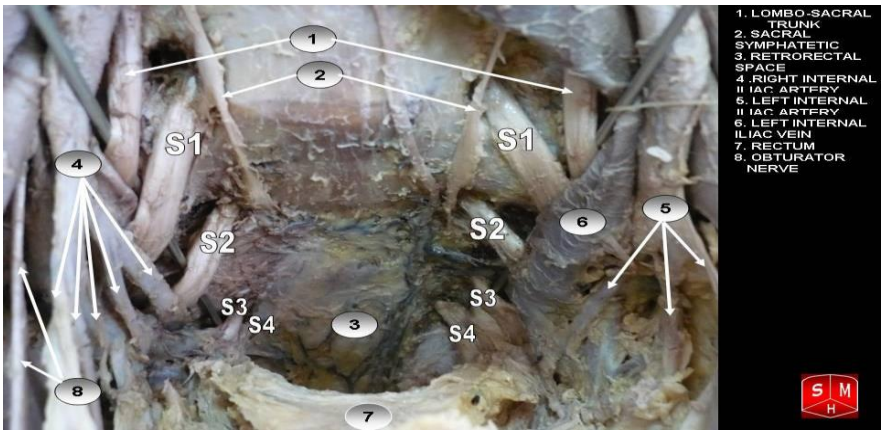
The nerves forming the coccygeal plexus approach the lower part of the greater sciatic foramen and unite to form a flattened band with several branches arising from its anterior and posterior surfaces. The group itself is continued as the sciatic nerve, which divides into the tibial nerve and the common fibular nerve at the back of the thigh; these two nerves sometimes arise separately from the plexus, and in all cases their independence can be demonstrated by dissection. The sacral plexus and the lumbar plexus are often considered to be one and form a large nerve plexus. Lumbar trunk unites two bundles of nerves.

Relationships

The hamstrings lie on the back of the pelvis, in front of the piriformis muscle and pelvic fascia. In front of it are the internal iliac artery, internal iliac vein, ureter and sigmoid colon. The superior gluteal artery and vein pass between the lumbosacral trunk and the first sciatic nerve, and the inferior gluteal artery and vein pass between the second and third sciatic nerves.

Nerves are formed

All the nerves entering the plexus, except the third coccyx, are divided into ventral and dorsal divisions, and the nerves arising from them are given in the following table:

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